

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal with interconnect at the intersection of MD 528 (Coastal Hwy) and 70th Street in Worcester County. Video detection shall be used for all approaches and the interconnect cable shall be replaced south to 65th Street. MD 528 (Coastal Hwy) is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA six-phase, semi-actuated mode, with the MD 528 (Coastal Hwy) approaches continuing to run concurrently. Exclusive/Permissive left turn phases shall remain in operation for both approaches of MD 528 (Coastal Hwy). A pedestrian phase with pushbutton actuation shall be provided across the south leg of MD 528 (Coastal Hwy). The pedestrian phase with pushbutton actuation across the north leg of MD 528 (Coastal Hwy) shall remain in operation. The 70th Street approaches shall continue to operate concurrently.
- A full-traffic-actuated, eight-phase controller with video Interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- This traffic signal was designed on the premise that the existing signal will be removed prior to the construction of the proposed signal.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

ITEM NO.	DESCRIPTION	QUANTITY
9000	Video interface equipment	1 EA
9042	Controller ASC II with telemetry	1 EA
9044	Controller cabinet, size "6"	1 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	102.5 SF
	D3-2 "Coastal Hwy" sign, (variable x 16") dual faced mast arm mounted.	2 EA
	D3-2 "70 TH Street" sign, (variable x 16") dual faced mast arm mounted.	2 EA
	R10-12 "LEFT TURN YIELD ON GREEN (BALL)" sign, (36" x 42") mast arm mounted.	2 EA
	R3-17 MOD "DIAMOND (SYMBOL) RIGHT LANE, Buses and Turns Only", sign (30" x 42") mast arm mounted.	2 EA
	R9-1 MOD "YIELD TO PEDS" sign, (48"x48") mast arm mounted.	2 EA

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	2 EA
2001	Class 2 Excavation.	5.5 C.Y.
2002	Test Pit Excavation	5 C.Y.
5004	12" white heat applied permanent preformed thermoplastic pavement marking.	500 L.F.
6001	Furnish and install depressed curb and gutter.	50 L.F.
6002	Standard type A combination curb and gutter 12" gutter pan 8" depth.	40 L.F.
6004	4" concrete sidewalk.	500 S.F.
8001	Pre-manufactured camera to controller (250' length) cable	3 EA
8003	Pre-manufactured camera to controller (500' length) cable	1 EA
8010	Furnish and install 12" pedestrian signal head section	8 EA
8011	Furnish and install 12" vehicular traffic signal head section	32 EA
8015	Furnish and install 3" weatherhead.	2 EA

EQUIPMENT LIST (CONT.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
8019	Furnish and install 8" vehicular traffic signal head section.	12 EA
8020	Furnish and install control and distribution equipment (120/240 V, 1 phase 3 wire system).	1 EA
8026	Furnish and install 18' special "T" steel pole with 60' mast arm.	1 EA
8030	Furnish and install breakaway pedestal pole (10').	1 EA
8032	Pedestrian pushbutton and R10-4(1) sign. (Note: Sign to read "PUSHBUTTON TO CROSS COASTAL HWY").	4 EA
8037	Furnish and install 18' special "T" steel pole with twin 60'/50' mast arms.	1 EA
8047	Remove and dispose of existing foundation 12" below grade.	5 EA
8048	Remove and dispose of existing material and equipment per assignment.	1 EA
8049	Furnish and install video detector camera.	4 EA
8051	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trench.	110 L.F.
8053	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trench.	25 L.F.
8057	Furnish and install concrete for signal foundation.	16 C.Y.
8058	Furnish and install wood sign supports 4" x 4".	15 L.F.
8060	Furnish and install No. 6 AWG stranded bare copper ground wire.	600 L.F.
8061	Install 1" galvanized riser AWG stranded bare copper	20 L.F.
8067	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - slotted.	140 L.F.
8072	Furnish and install electrical handhole.	4 EA
8075	Install overhead sign.	102.5 S.F.
8080	Furnish and install ground rod - 3/4" x 10'.	5 EA
8082	Furnish and install electrical cable - 2 conductor (No. 14 AWG).	625 L.F.
8083	Furnish and install electrical cable - 3 conductor (No. 14 AWG).	645 L.F.
8084	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	120 L.F.
8085	Furnish and install electrical cable - 7 conductor (No. 14 AWG).	1410 L.F.
8093	Install controller and cabinet base mount.	1 EA
Neg.	Furnish and install 3" electrical conduit - polyvinyl chloride riser.	30 L.F.
Neg.	Furnish and install macadam patch.	10 S.F.
Neg.	Relocate irrigation system/lighting cabinet.	1 EA
Neg.	Furnish and install 18' special "T" steel pole with 38' mast arm.	1 EA
Neg.	Relocate ground mounted sign to new wood post.	1 EA
C. EQUIPMENT TO BE REMOVED		
ITEM NO.	DESCRIPTION	QUANTITY
None	The signal shop shall remove the controller and all necessary equipment from the cabinet	

The cabinet and all other signal materials are to become property of the contractor.

The contact persons for District #1 are as follows:

Mr. Gene Cofield
Assistant District Engineer - Traffic
Phone: (410) 677-4040

Mr. Jimmy Wright
Assistant District Engineer - Maintenance
Phone: (410) 543-6715

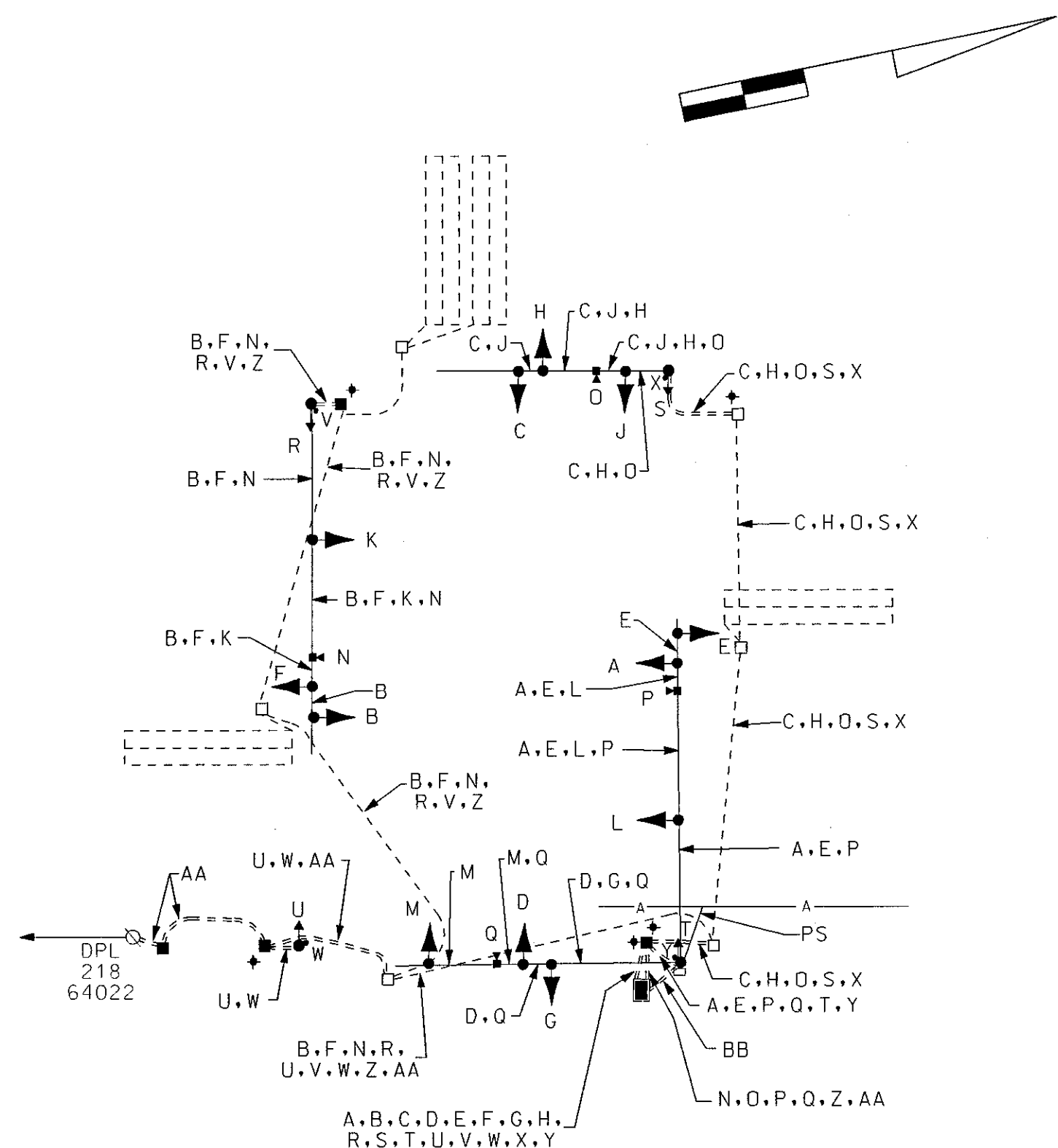
Mr. Bruce Poole
Assistant District Engineer - Utility
Phone: (410) 677-4082

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 & 5	←G→R	←G→R	R	←G→R	←G→R	R	R	R	R	R	R	R	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																
PHASE 1 & 6	←G→G	←G→G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 & 6 CHANGE	←Y→G	←Y→G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	←G→G	←G→G	G	R	R	R	R	R	R	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	←Y→G	←Y→G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	G	G	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- 12-PAIR VOICE GRADE INTERCONNECT CABLE (OVERHEAD)
- 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- LOOP WIRE (NO. 14 A.W.G.)
- PROPOSED OVERHEAD SERVICE (MID SPAN) TO BE INSTALLED BY CONNECTIV
- GROUND ROD



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
MD 528 (COASTAL HIGHWAY) AND 70th ST.

DRAWN BY: RC	F.A.P. NO.	TS NO.	SHEET NO.
CHECKED BY: RRZ	S.H.A. NO.	357C	2 OF 2
SCALE: NONE	COUNTY: WORCESTER	T.I.M.S. NO. E996	
DATE: 7-29-02	LOG MILE: 23052804.24		



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